

# Reflection of acoustic waves from the boundary of contaminated fog

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## Abstract

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## References

- [1] Nigmatulin R I 1989 Dynamics of multiphase media (Moscow: Nauka)
- [2] Gubaidullin D A 1998 Dynamics of two-phase gas-vapor-droplet media (Kazan: Kazan mathematical society)
- [3] Temkin S 2005 Suspension acoustics: An introduction to the physics of suspension (New York: Cambridge University Press)
- [4] Bezrukov N A and Chernookulsky A V 2015 Proceedings of the Russian Academy of Sciences Physics of the atmosphere and ocean 52 577
- [5] Baudoin M, Coulouvrat F and Thomas J L 2011 J. Acoust. Soc. Am. 130 1142
- [6] Gumerov N A and Ivandaev A I 1988 PMTF 115
- [7] Gubaidullin D A and Ivandaev A I 1993 PMTF 75
- [8] Shagapov V Sh and Sarapulova V V 2014 Izvestiya Atmospheric and Oceanic Physics 50 602
- [9] Brekhovskikh L M and Godin O A 1989 Acoustics of Layered Media (Moscow: Nauka)
- [10] Gubaidullin D A and Fedorov Yu V 2012 High Temperature 50 616
- [11] Gubaidullin D A and Fedorov Yu V 2018 Acoustical Physics 64 164
- [12] Gubaidullin D A and Fedorov Yu V 2017 Doklady Physics 62 478
- [13] Shagapov V Sh and Sarapulova V V 2015 Applied Mechanics and Technical Physics 56 119